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An
Inaugural Dissertation
On
Hematuria.

Chs. Fahnstock

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On Hematuria.

The diagnosis of Hematuria is naturally attended with but little difficulty; since the external appearance of the blood, renders the case at once evident.

The urine does sometimes, however, put on appearances resembling very much as if blood were mixed with it, without this being the case, as for instance, in inflammatory fever, it often acquires a deep red colour, and in typhus, it has been voided of a dark brown or almost black appearance. The urine, moreover, sometimes acquires an appearance, resembling the admixture of blood with it, from the articles of diet used, such as raspberries, red beets, the fruit of the *Cactus Opuntia*,* or from the medical use of rhubarb, logwood, balsam Peru &c.

By proper attention however, these latter appearances may be distinguished from bloody

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urine, without much difficulty. There is much more difficulty in ascertaining the precise source of the bleeding, whether, it proceeds from the kidneys, ureters, bladder, vesicula seminalis, or the urethra. I will take up each of these varieties in turn.

1st When the blood proceeds from the urethra. In this case the blood flows off pure and unmixed with the urine, in which it varies from the hemorrhages that proceed from the kidneys, ureters, and bladder, where the blood is always evacuated mixed with urine: and often attended with considerable difficulty of micturition.

The remaining symptoms vary according to the causes that produce the disease, and according to the part of the urethra from which the bleeding proceeds. If bleeding from the urethra, arises from some anomaly in the haemorrhoidal disease, it is generally somewhat periodical in its appearances. In this case it is preceded by pains, burning, and

and an itching in the urethra and anus, with a spasmodic pain of the thighs, and sometimes a temporary suppression of urine. In this case the bleeding comes almost always from near the neck of the bladder. Such a hemorrhoidal *Stygmatoris* may, by recurring for a long time, become habitual, and then it will occur without pain on any slight exertion.

In gonorrhoea, there is frequently a bleeding from the urethra, especially when there is *chordee*. It is also induced, by violent erections, pollution, and excessive venery. Commonly, the bleeding here, is but trifling, occasioning but a slight streaking, or discoloration of the natural mucus of the urethra; occasionally, however, the bleeding becomes strong and proceeds to an alarming length. (Bell on the venereal).— Finally bleeding from the urethra may arise from external violence: by the awkward introduction of catheters and bougies &c.

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2nd The hemorrhage may proceed from the seminal vessels. In this as in the former variety the blood passes off without micturition. Here however the flow of blood, is attended with a sense of venereal pleasure; it generally passes off intimately mixed with the semen, but may also appear pure and unmixed, after excessive venery or onanism.

3rd The blood may proceed from the ureters. Here the patient complains of pain and tension along the course of the ureters, and the blood, always passes off in very small quantities. The Diagnosis, is however, without doubt in these cases, always attended with uncertainty. The blood may pass from the kidneys, and in its passage through the ureters may produce pain in them. Practically, however, this is of no importance.

4th Hemorrhage from the bladder.

This is to be distinguished from renal

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hemorrhage, by the sensations of uneasiness, or pain
being felt in the region of the bladder. There
are commonly, also present, painful erections,
burning in the glans penis, or in the whole of
its body, general spasmodic affections, cold
extremities, fainting, and in general all the
symptoms of a slight inflammation of the
bladder. The blood is not very intimately
mixed with the urine but swims like cakes
or clouds in it, and settles down soon after it
is voided, into a coagulum. It is generally
of a blackish appearance and coagulated
when voided; but does also sometimes pass off
uncoagulated, and quite pure without any
admixture of urine. Hemorrhage from the
bladder is often preceded by a discharge of
mucus from the urethra.

5th Hematuria, or blood in the urine.

The blood is here, and sometimes mixed
with the urine, when voided. There are no

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clots of coagulated blood seen swimming in the urine, this presents a uniformity in colour and consistence. After the urine has stood for some time in a vessel, the blood is deposited on the bottom in a soft and mushy mass, resembling mud. In some cases there is uneasiness in the bladder, but a good deal in the region of the kidneys, such as spasmodic pains in the loins, and near the spine immediately over the kidneys; there is also retraction of the rectum, numbness of the thigh and leg.

Hæmaturia, strangury and even total suppression of urine sometimes appear in this case, and in general all the symptoms indicative of a slight inflammation of the kidneys are to be noticed.

The predisposition to the disease depends upon a peculiar weakness of the parts or a relaxation of the vessels of the kidneys especially when the winding proceeds from these parts, which may be natural or acquired, at any



periods of life, and without which the greater number of occasional cases are not readily capable of exciting the disease. In this position to this complaint, is particularly apt to come on in very old people, and thence we see these so readily affected with bloody urine or bleeding from the urethra, upon the action of any slight occasional cause.

Urinary and renal calculi, are without doubt the most frequent occasional cause of bloody micturition, especially, when the system has been excited by the misuse of ardent spirits, or any violent exercise, such as riding on horse back or in a rough carriage. These calculi, when they stick fast in the ureters are perhaps the sole cause that can ever produce bleeding from these parts.

When the predisposition, however, is strong the disease may without the presence of calculi irritating the urinary organs, arise from any,

[illegible]

violent exertions, such as lifting or carrying heavy burthens, violent exertions in riding, a fall or blow upon the region of the kidneys &c.

Robust, plethoric and fat women, advanced in years especially about the period when the menses cease to appear, are very liable to bloody urine after overheating themselves or by using too rich and nutritious a diet. In those who are predisposed to such bleedings it is not uncommon to meet with bloody urine in inflammatory fever, as well as in the worst cases of typhus. In each latter disease it always indicates much danger. In scorbutic affections it may also appear, especially in their most aggravated form.

When the vessels of the uterus are the seat of a morbid state of vascular excitement, which act upon these organs may readily produce bloody urine. In such a state of the kidneys, bloody urine, has also been known to be produced by the irrita-
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of bile, worms and other irritating matters in the bowels. Particular articles of diet or other things acting as slight diuretics, have likewise frequently induced this complaint, when the kidneys have been very much relaxed, or subject to the influence of irritation. Among these are, asparagus, garlic, onions, radishes, cucumbers &c.

The more active diuretics when given in immoderate doses, will sometimes, without a predisposition to the complaint, produce bloody urination. Of these the Cantharides most frequently produces this effect. Children during dentition sometimes pass bloody urine, without any further evil consequences.

Finally the complaint I am speaking of may also arise from organick affections of the kidneys and the bladder, such as Scirrhus, cancer, swelling, of every kind suppuration &c.

From the variety of causes taken notice of; it is readily to be understood that the symptoms,

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duration, cause, and the more or less frequent
recurrence of the disease, may also be exceedingly
various.

The Prognosis

When the blood issues from the urethra,
the danger is much less than when it issues
from the bladder or kidneys: but, on account
of its being generally less in quantity, and
partly because, it is not so often the consequence
or the cause of dangerous organic affections.

When the blood issues from the kidneys,
it is dangerous on account of the quantity, and it
is however generally followed by death; when it
occurs, as a symptom of putrid fever, erysipelas,
and in old people. Its danger is also
proportionate to the general debility
of the system, and the local atony or relaxation of
the kidneys. Hence the danger of haematuria from
urine in old age, which generally adds on to



dropy or in slow fever. When the causes that
have it not removed, the prognosis becomes
unfavourable; and hence in haematuria from
calculi, ulcers, or indurations in the kidneys,
ureters or bladder, the prognosis is bad. In
typhus, scarlatina, and small pox, bloody
urine, we are informed by Sydenham, is almost
always a fatal symptom. It is also derived
from the misuse of diuretic articles of food or
medicine haematuria is not often attended
with danger.

When the urine is passed bloody urine, we
are entitled to expect the same way again.
When the blood is excreted in the kidneys, ureters,
or bladder, is not attended with pain and
dangerous suppression of urine may be the
consequence. Such coagulations, serving
as a nucleus, may also, lay the foundation
of a calculus.

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Treatment

The treatment of Haematuria, varies according to the causes which have given rise to it. A great weakness or relaxation of the vessels of the kidneys has given rise to this complaint, as is very often the case in old people, or when after debilitating causes, such as excess in venery, evident shaking of the body by riding on horseback or in a waggon. Blood is passed with the urine without occasioning any particular sensation of pain, we will frequently succeed in removing the disorder by, using gentle astringents, such as Uva Ursi, extract of hamamelis, alum whey; or when the case is violent alum given in substance together with some other astringent may be convenient. If the urine is bloody. The emulsi of mineral waters are also in such cases often very efficacious. Hoffman recommends as specifically efficacious a decoction of agrimonia and consolida major. —



If the haemorrhage becomes so copious as to render
an immediate interposition of medical aid
necessary, we may resort to the external application
of cold water, or even snow to the region of the
kidneys and pelvis; and if the bleeding comes
from the urethra we may use the injection of
cold water: but only under such urgent
circumstances as must admit of no delay must such
a plan be resorted to. In several cases we also
have recommended as a substitute to these means...

After a full supply of water is taken to prevent
a recurrence of the disease we must endeavour to
strengthen the system. In this a milk diet
contributed in an unusual manner. It is well
known that by using a diet even as limited
more than once in strengthening the constitution.
But the most frequent is when in the process
are the mineral waters impregnated with
iron and tartar. The addition of these
preparations was very occasionally necessary.



removed or avoided as much as possible. The patient must not ride a rough horse, nor even walk very fast; he must avoid using such articles of diet as stimulate the kidneys, as onions, asparagus, garlic, parsley &c nor use strong and heating drinks. During the presence of the disorder, the patient must use mucilaginous drinks, and a mild farinaceous diet, such as barley water, flaxseed tea, rice, sago, or weak animal broths.

When the disease arises from a chemical or mechanical irritating cause in the kidneys or urinary bladder, we must use freely oily, and sliding remedies, such as *ol. olivæ*; gum arabic &c and even antispasmodick articles, such as *Thecaëantha* in small doses; *Hyosciamus* or *opium*. In these cases, anodyne embrocations, warm applications and soothing injections are often of considerable service.

If there is an inflammation present in the kidneys and bladder, together with general plethora; a circumstance

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which frequently occurs from the suppression of the hemorrhoidal or menstrual flux, we must use vigorously both topical and general bleeding; and exhibit mucilaginous drinks copiously; in such cases however, we cannot use the common antiphlogistic remedy, Sal nitre, as this is calculated, in a considerable degree to irritate the urinary organs.

When bloody urine, is brought on by cantharides, we must use camphor in emulsion, together with copious draughts of some mild and mucilaginous drinks. Where acid and irritating matters lodged in the intestinal canal produce this disorder, as it sometimes happens in children, Cathartics and anthelmintics are the remedies to be resorted to.

Bleeding from the penis, does not very often require any particular care. If however it becomes violent, we may direct the penis and scrotum to be immersed in cold water which is generally, effectual in giving immediate relief.

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